Applicant: Khai Hee Kwan   **Examiner:** Shahid R. Merchant.
Title: Method, apparatus and program for user to determine the ownership cost of a motor vehicle.

<center>**REMARKS**</center>

The paper titled "Economics of automobile leasing: The call option value" by Stephen E Miller in the Journal of Consumer Affairs; Summer 1995; 29, 1; ABI/INFORM Global, at page 199 (hereinafter 'Paper') is a treatise in explaining the existence of a call option embedded in closed-end leases with guaranteed buy back provisions. Specifically, it demonstrates the value of this call option. (Abstract).

The examiner provided page 203 and 209 of said paper and ask applicant whether this anticipation under 102(b), presumably as a publication. With respect, notwithstanding this call option described is derived from a closed-end lease with guaranteed buy back provisions, the applicant submits that as per Claim 1, 8, 15, the physical elements of network, central controller and plurality of terminals are not found. Furthermore, there is no step for "perform a payment transaction" as the Paper does not suggest user to pay for the option. Moreover, even though, it is within the skill of one skilled in the art to implement calculating the value of a call option using a computer which is not denied by the applicant, the other elements of network and plurality of terminals must be found as well.

At best which is not denied the paper merely teaches calculating the value of the CALL option premium embedded in closed-end lease with guaranteed buy-back provisions and this is done by taking expected cash flows in said guaranteed buy-back in order to make a fair comparison of the lease with its alternatives (page 213 in conclusion).

In the <u>Amended Claims</u>, there is no teaching for calculating an option to purchase or sell for a <u>new</u> vehicle as claimed. It is plain that an option to purchase a new vehicle does not anticipate an option to purchase a leased vehicle at the end of a leased arrangement whereby the leased vehicle could not be NEW.

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Alternatively, the Paper is suggesting there is a calculatable value in the <u>embedded call</u> <u>option</u> by equation (2) in page 203 of the paper based on the assumption that lessor could only receive a maximum of P* (the guarantee buy-back price or residual value) at page 202 (last line) <u>at the end of the leased term</u> while this claimed option is calculated based on a future delivery date of the vehicle at a price the user is willing to pay (which is not necessarily maximum of P*). Furthermore, P* is provided by the lessor and not the purchaser or seller.

FIG A
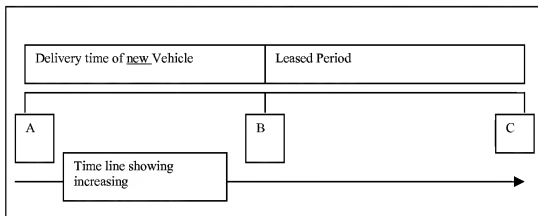
As shown in FIG A, the paper teaches calculating call option at point C (ie end of leased) while in this claimed invention the call option is calculated at point B with delivery time from A to B. Point A being the Time 0. Point B being time when vehicle is delivered and Point B to Point C being lease period. This assumed that the vehicle can only be purchased at the end of the leased period is stated in page 207 in third para "When the leased car is assumed to be purchased....." which is not the same as purchasing or selling a new car as claimed.

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To further support the contention that the call option calculation is done for a leased and not facilitating a sale or purchase as claimed, the applicant submits equation 7 at page 209. This formula was derived based on the following :

(1) The lessor's estimate of Present Value of C can be imputed from differences in cash flows from <u>fair market value</u> and guaranteed <u>buy back leases</u> when the lessor offers BOTH leases on the auto of interest. (2) The lessor's net cash inflows correspond to the lessee's net cash outflow under the (3) assumption that the leased auto is purchased at the end of the lease regardless of whether the lessee retains the auto. (para 3 in page 208). In short, to reach equation 7 at page 209, there are three necessary assumptions as shown in numbered (parenthesis) which elements are not found in the claimed invention. The equation 7 also includes lease down payment, lease security deposit, monthly lease payment etc as can be found in page 205 under note (a) below Table 1.

There is no support to show that calculation to reveal the option value of a lease purchase option at the end of the leased period must necessarily reveal calculating a purchase or sale of a new vehicle as claimed (as amended).

<u>Currently Amended Claims in details.</u>

Furthermore, the applicant has amended the independent claims to distinctively claimed the invention and not withstanding the above, the following arguments shall place the claims in allowance.

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Claims 1, 8,15

Using Claim 1 as representative.

The current amendments as in the body of Claim 1.	Paper	Comments with reference to Application.
providing a vehicle manufacturer system linked to said network;	Not found	Teaching found in Fig 1. No 102(b)
receiving over said network at said central controller, vehicle pricing information comprising first data representative of time to delivery of said new vehicle, a second data representative of a delivery destination of said new vehicle and third data representative of a price said user is willing to pay for said new vehicle;	The Paper fails to show : delivery time, delivery destination and price determined by user. The residual price is specified by lessor. (pg 208, line 11 from bottom).	The three pieces of datum are found at page 5 line 24 (delivery time and destination) and page 9 line 12 (willing to pay). Residual price is the remaining value at the end of leased period and cannot be price of a new vehicle.
calculating at said central controller the vehicle option premium based on said first data and said third data;	Yes there is calculating but uses difference in cash flow between two type of leases (Para 3 at page 208). There is no delivery time and said price. Paper teaches the price as residual	No because the premium calculated in paper does not use delivery time and said price by user. Paper teaches for call option exercisable at end of a leased arrangement.

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	price as specified by lessor. (pg 208, line 11 from bottom).	
outputting the vehicle option premium to the user for decision over said network;	Partially, as a computer must output the result.	However there is no user "decision over a network" ? Here, decision looks at the output calculated to accept said premium or not. In Paper, it is academic to compare between leasing and alternatives by revealing an option value in the lease.
upon acceptance by said user of said vehicle option premium at said central controller, performing a payment transaction for said premium or deposit over said network; and	Paper only teaches finding/revealing this value. There is no step performing payment transaction as this value is artificially derived from the leased cash flow payments purely for comparison.	Deposit is found at page 3 line 9 of Application. Moreover there is no application of this value in the paper other than teaching the user to compare with other lease or purchase alternatives (See conclusion of paper). No 102(b).
creating a vehicle option contract to lock in said third data.	No. The option is already in the lease agreement for <u>residual price</u> (provided by lessor) and the paper tries to	Vehicle option contract is found at line 8 page 8. Lock in said price is found at line 5 page 3. If option already exist in leased agreement, it could not be created again ? No 102(b)

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	prove its value only. Residual price is not the same as price user is willing to pay as the former is decided by lessor.	

As can be seen from the above analysis, there are at least 3 elements which are not satisfied. Therefore 102(b) is not made. Furthermore, the addition of a network linked to a vehicle manufacturer would not be obvious. The Paper deals with a leased vehicle (already assumed leased) which option value is revealed using a series of assumptions to exist at the end of the leased term rather than purposively calculated to lock in a price for a yet to be manufactured vehicle hence the need to link to said manufacturer to place the order would not be obvious.

The option in Paper is calculated from the differences in the cash inflows from fair market value and guaranteed buy back leases when the lessor offers both leases for the same auto (Para 3 at page 208) which means if not for the revelation by this Paper, the vehicle option value is unknown and embedded in the lease arrangement. It is submitted that merely because this Paper reveals this option value (by calculating the difference in cash flow), it does not also teaches user's acceptance of its value and paying for it. Why should user pay for something that in practice is really part of the lease payment (ie purchase option) ? There is no teaching of any lease arrangement where the lessee is asked to pay specifically a call option. Rather the practice is to make a monthly payment (cash flow) and at the end the purchase option is given (without the making of a further payment).

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While in this claimed method, there is no lease but a need to know the value of an option to purchase or sale a new vehicle, once this value is determined (not from differences in cash flows as in Paper : Para 3 at page 208) then user has to make decision and only when it is accepted, an option contract to purchase or sale is created to lock in the price. The steps flow as claimed does not anticipate the derivation of option value in the paper.

Claim 2,9,16.

The amended claims state that binomial pricing model is used which is taught in specification page 14 line 9 of non-provisional application. Paper described its call option is calculated by cash flows (See table 1 at page 205). While it is admitted that Binomial is well known in conventional option pricing and within the skills of one ordinarily skilled or alternatively "obvious to try" but these claims are dependant on amended Claims 1,8,15 which as submitted fail to show all elements, therefore these claims should also be allowed on the same basis.

Claims 3,10, 17

The amended claims merely rectified the various antecedent matters and therefore should not disturb its determination as previously made by the examiner in allowing them.

Claims 4,11, 18

The amended claims now incorporates modified Black Scholes in the form of a PUT option formula. There is no teaching of a PUT option revealed from a lease in the Paper so by itself it does not anticipate. Even where there is a CALL option in the form of

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equation 2 at page 203, the paper clearly states using equation 2 is not practical, as an estimate of the parameter σ is required . Therefore, to get around this the Paper suggest using the Lessor's estimate of the present value of Call can be imputed from the differences in the cash inflows from fair market value and guaranteed buy back leases when the lessor offers both leases for the same auto (Para 3 at page 208). Given Black Scholes requires σ and as shown the Paper teaches going around this, then it is submitted it is not obvious to try by one skilled in the art of option calculation.

Furthermore while Black Scholes is well known in the art including PUT premium calculation, there is still the question whether one skilled in the art could be sufficiently imaginative to modify the elements as claimed. Even if this could be shown, again these claims are dependent on the independent Amended Claims of 1,8,15 which as submitted are not anticipated nor obvious.

Claims 5,12

These claims deal with the administrative nature of said transaction of purchasing a vehicle option. The examiner had taken official notice. The applicant respectfully ask for evidence of this as per 37 CFR 1.104 (d)(2) to support this judicial notice. In particular, the applicant charge the examiner that it is unknown to "posting transaction details accessible by all users". In short, if it is well known to post the result of the vehicle option value then why is there a need for an elaborate treatise to show its existence ? The reality is that leased agreements do not show this embedded value nor post details of its agreements "**accessible by all users**". In fact, the motivation for the Paper is to assist users to discover this value as a way to compare with other alternatives implicit to say that these values are not posted and accessible by all users. It is also recognized there is a difference between discovering an option value and asking user to pay for this value upon which this data is then available by all users. The examiner had not reasoned why one

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skilled in the art upon discovering its value would suggest asking user to pay for this value and further posting the transaction accessible to all users.

Claims 6,13,19

These amended claims relate to using vehicle option to purchase a vehicle. The examiner provides Paper at page 203 and 209 as evidence to anticipate these claims. As mentioned the entire paper is to prove that a call premium is found having estimated its value from deriving its present value by the differences in the cash inflows from fair market value and guaranteed buy back leases when the lessor offers both leases for the same auto provided this lessor's net cash inflow is equal to the lessee outflow WHEN the assumption that the leased vehicle is purchased at the end of the lease regardless of whether the lessee retains the auto (para 3 at page 208). In this regards, it is submitted that the equation 7 in page 209 is only useful when in it is assumed the vehicle must be purchase. This is in contrast with the option created in this claim invention where it provides a right but not an obligation to purchase.

Furthermore because it is only an assumption to meet the equation, there is no teaching from Paper of updating a database to reflect the vehicle option is used.

Claims 7,14,20

These amended claims relate to using vehicle option to sale a vehicle. The examiner provides Paper at page 209 as evidence to anticipate these claims. The applicant respectfully submits that page 209 merely shows equation 7 (ie formula to calculate the option) and not to sell the vehicle. As part of this calculation, which is derived by present value of the differences in the cash inflows from fair market value and guaranteed buy back leases when the lessor offers both leases for the same auto provided this lessor's net cash inflow is equal to the lessee outflow WHEN the assumption is that the leased vehicle is purchased at the end of the lease regardless of whether the lessee retains the auto (para

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3 at page 208). The critical difference is between an assumption to purchase versus actual purchase. Even if this assumption is incorrect, it is clear that user cannot SELL as this is contrary to purchase.

Furthermore because it is only an assumption to meet the equation, there is no teaching from Paper of updating a database to reflect the vehicle option is used.

Claim Objections

The suggestions by the examiner have been taken in the amendments.

35 USC 112 First Para

- The Examiner asserts that "Verifying the validity of the vehicle option is not found in the specification." The applicant agrees and the step is deleted in Claims 6,7,13,14,19 and 20.

35 USC 112 Second Para

Referring to Para 18 of the Action Letter, the Applicant has deleted revising step.
Referring to Para 19 of the Action Letter, the issues have been deleted.
Referring to Para 20 of the Action Letter, the issues have been amended to include vehicle option premium in preamble.
Referring to Para 21,22,24 of the Action Letter the issues have been deleted.
Referring to Para 23 of the Action Letter, the issues have been rectified.
Referring to Para 25 of the Action Letter, the issues have been rectified.

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Drawing

A corrected drawing of Figure 6 is attached whereby the correction is for the misspelled word "Determine" in Box S20. Please insert "T" in the word "Deermine" in box S20 as shown in markup sheet. The replacement sheet is also attached.

        Yours truly,

        Khai Kwan

        023336

        25 Oct 2007